

April 3, 2021

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Re: US v Jamie Clemons
Re: Rule 26 (a) (1) Disclosure

Disclosure, amended

If called to testify and asked, Dr. Reich would provide the scientific explanation and background for processing evidence with the goal of generating a DNA profile. Dr. Reich would describe the laboratory steps required to collect biological material from submitted evidence, here a glove, and describe the use of 'swabs' for this process. Further Dr. Reich could describe that two (2) areas of the glove were sampled and subsequently processed for DNA profiling.

Dr. Reich could describe the laboratory steps taken to develop a DNA profile and how these steps were documented by the ATF laboratory. One of the relevant steps in the process, DNA quantification, *i.e.*, measuring how much DNA was recovered from the swabbing of the gloves, could be detailed further as this information is relevant to understanding the possible origin of the recovered DNA. Of the two areas of the glove where the ATF laboratory attempted to collect biological evidence, only one sample /area had measurable amounts of DNA.

Dr. Reich could note that most of the glove was sampled by the swab technique (which is a ubiquitous method in forensic DNA laboratories) and that at most the equivalent amount of DNA from ~100 cells was recovered. In practical terms, approximately a single fingerprint, or possibly two fingerprints worth of DNA was obtained from swabbing the entire internal area of the glove.

The results of consuming the recovered DNA in the multiplex STR PCR reaction and analyzing that PCR reaction could be described: a mixed DNA profile from at least two (2) contributors.

Dr. Reich could state that obtaining a mixed DNA profile is routine in the processing of questioned forensic DNA evidence and that DNA profile mixtures are a constant feature of forensic DNA analysis. Dr. Reich would state that it was possible to analyze the mixed DNA profile and to determine that Mr. Clemons cannot be excluded as a contributor to the recovered DNA.

Forensic DNA can (under appropriate circumstances) provide statistically powerful information as to whose DNA is present. However, the method, and the DNA profile itself, is silent on timing and intention.

Dr. Reich would state that while the identification of Mr. Clemons is not in dispute, there are a number of details that cannot be answered or even addressed by forensic DNA analysis.

These questions include information on

- i) when Mr. Clemons or the second contributor's DNA might have been deposited on the glove,
- ii) how Mr. Clemons or the second contributor left his/her DNA on the glove with the two most likely options being either direct transfer or, considering the amount of DNA left on the item, secondary transfer,
- iii) how long did Mr. Clemons, the second contributor or the possible intermediary transfer source make contact with the glove,
- iv) what action or actions might Mr. Clemons and the second contributor (who has been tentatively identified) might have been performing when their DNA was left on the inner surface of the glove.

Dr. Reich might also address the questions of why there was so little DNA on the glove, including why no DNA was recovered from the velcro/fastener area of the glove.

Dr. Reich could detail that the identity of the second contributor to the inner surface of the glove has been putatively identified through the availability of a reference standard that was processed for DNA profiling and then compared to the mixed DNA profile obtained from the inner surface of the glove.

Here the identification of the second contributor is not completely definitive, as the DNA profile of the second contributor to the glove is not complete, in forensic DNA parlance, a partial profile. However, the submitted reference standard cannot be

excluded as a contributor and the data does account for the ratio of male to female DNA on the evidence sample.

The putative identification of the second contributor completes the analysis of the forensic DNA as provided under discovery.

A handwritten signature in blue ink, appearing to read "Karl A. Reich". The signature is fluid and cursive, with the first name "Karl" and last name "Reich" clearly distinguishable.

Karl Reich, Ph.D.
Independent Forensics
Lombard IL